wherein said demodulator demodulates the received signal as first and second PSK signals, said first PSK signal representing a first data stream to be reproduced, said first PSK signal comprising n-value signal points, said second PSK signal representing both said first data stream and a second data stream to be reproduced, said second PSK signal comprising m-value signal points, where m is an integer larger than n,

wherein the m-value signal points of said second PSK signal are divisible into n groups of signal points which are distinguishable from one another in the signal space, and said demodulator distinguishes said n groups of signal points from one another as the n-value signal points of said first PSK signal by demodulating the received signal as said first PSK signal, and wherein

high priority information is demodulated at least in said first data stream.

2. The digital TV receiver in accordance with claim 1, wherein said demodulator demodulates information relating to a low-resolution component of the video signal from said first data stream and demodulates information relating to a high-resolution component of the video signal from said second data stream.

3. The digital TV receiver in accordance with claim 1, comprising means for stopping output of said second data stream when an error rate of the received signal is high.

4. The digital TV receiver in accordance with claim 1, wherein said demodulator comprises first means for

demodulating the received signal as a QPSK signal to reproduce the first data stream and second means for demodulating the received signal as a 8PSK signal to reproduce both of the first data stream and the second data stream.

5. A digital TV receiver comprising:

a receiving section for receiving a PSK (Phase Shift Key) modulation signal comprising m-value signal points disposed on specific phases of a given constellation in a signal space diagram and representing a first data stream and a second data stream to be reproduced;

a demodulator for demodulating said PSK modulation signal from said receiving section into a digital signal;

an error correcting section for error correcting a demodulation signal from said demodulator; and

an image expander for expanding an error-corrected signal from said error correcting section to a video signal,

wherein said demodulator includes means for demodulating said PSK signal comprising m-value signal points as another PSK signal.

said another PSK signal comprising n-value signal points and representing only said first data stream, where n is an integer smaller than m, and wherein

high priority information is demodulated at least in said first data stream.